

Basic Stormwater Management Course

Participant Guide



Training provided by the Virginia Department of Environmental Quality
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Course Goal

Provide participants with the knowledge and tools needed to successfully meet the regulatory requirements of the VSM Act and Regulations to ensure the general health, safety and welfare of the citizens of Virginia, as well as provide protection for state waters.

Participant expectations

- Use the training materials as you like. All the materials that you received were prepared for your use, and you may use the handouts for note taking during the training.
- Be honest with yourself about your strengths and areas that you need to develop. You are responsible for your own learning. Ask for what you need from your trainers and other group members.

Acronyms

BMP: Best management practice

CA: Composted amended soils

CBPA: Chesapeake Bay Preservation Area

CDA: Contributing drainage area

CFS: Cubic feet per second

CN: Curve number

CPv: Channel protection volume

CSN: Chesapeake Stormwater Network

CSO: Combined sewer overflow

CWA: Clean Water Act

CWP: Center for Watershed Protection

DEQ: Virginia Department of Environmental Quality

ED: Extended detention

EMC: Event mean concentration

EPA: United States Environmental Protection Agency

ESC: Erosion and sediment control

ESD: Environmental site design

g/cc: Grams (weight) per milliliter (volume)

GP or Construction GP: Construction General Permit

HSG: Hydrologic soil groups

HUC: Hydrologic unit code

I-D-F curves: Intensity-Duration-Frequency curves

LDA: Land-disturbing activity

LID: Low-impact development

MS4: Municipal Separate Storm Sewer System

NHRCS TR-55: Natural Resources Conservation Service Technical Release 55

NOAA: National Oceanic and Atmospheric Administration

NPDES: National Pollution Discharge Elimination System

NPS: Nonpoint source

P: Phosphorus

P2 Plan: Pollution prevention plan

Regulated LDA: Land-disturbing activity of one acre or more, 2,500 square feet in all areas of jurisdictions designated as subject to the Chesapeake Bay Preservation Act, part of a larger common plan of development or sale that is one acre or more, or a more stringent area as established in local ordinance, that must follow the provisions of the VSMP Regulations and obtain state permit coverage, where applicable, and VSMP authority permit coverage.

RR: Runoff reduction

RRM: Runoff Reduction Method

SAV: Submerged aquatic vegetation

SWM: Stormwater management

SWPPP: Stormwater pollution prevention plan

Tc or TOC: Time of concentration

TMDL: Total maximum daily load (a federal and state regulatory term which describes the maximum pollutant amount a body of water can receive while still meeting water quality standards)

TV: Treatment volume

VESCP: Virginia Erosion and Sediment Control Program

VRRM: Virginia Runoff Reduction Method

VSMA: Virginia Stormwater Management Act

VSMP: Virginia Stormwater Management Program

VPDES: Virginia Pollution Discharge Elimination System

Module 1: Course Overview

Module 1 Objectives

After completing this module, you will be able to:

- Identify the training and certification requirements for stormwater management and erosion and sediment control

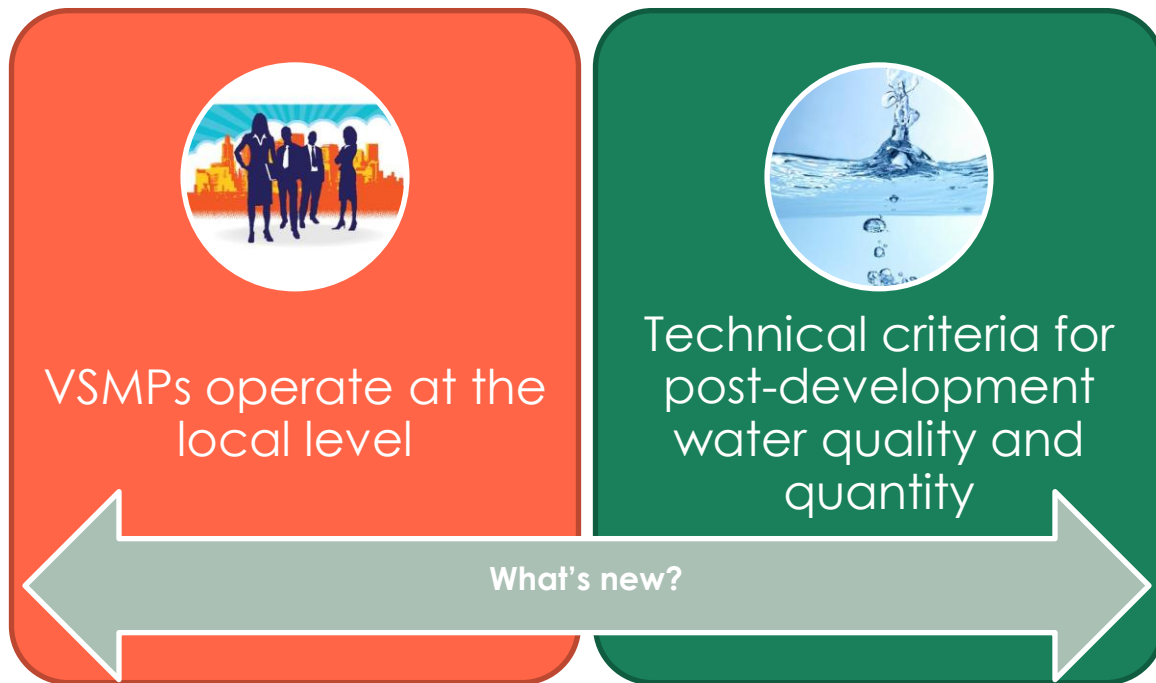
Module 1 Content

1a. Introduction

1b. Training and Certification

1c. Roles and Responsibilities in a VSMP Authority

1a. Introduction



The Virginia Stormwater Management Act (VSMA) was amended in 2012 with the passage of House Bill 1065, also called the Integration Bill. Among the changes is the requirement that certain counties, cities, and towns adopt and administer a local Virginia Stormwater Management Program (VSMP) – effectively creating a statewide stormwater management program that operates at the local level.

A cornerstone of the VSMP for all localities is the requirement for state permit coverage for regulated land-disturbing activities either under the General Permit for Discharges of Stormwater from Construction Activities (Construction GP) or an applicable individual permit. Starting July 1, 2014, VSMP authorities will hold the primary role of reviewing and approving applications for coverage under the Construction GP. Final permit coverage will still be issued by the Department of Environmental Quality (DEQ). VSMP authorities will also hold the primary role of inspecting best management practices (BMPs) and enforcing compliance with the VSMP authority permit and local stormwater ordinances.

The movement of the VSMP from the state level to the local level allows localities to integrate their stormwater management requirements with the requirements of erosion

and sediment control, flood insurance (if applicable), flood plain management, and Chesapeake Bay Preservation Act (if applicable) into a unified stormwater program. This is intended to make the submission and approval of plans, issuance of permits, payment of fees, and coordination of inspection and enforcement activities more convenient and efficient for both the locality and the applicant.

The VSMA and Regulations also bring about a new shift to the runoff reduction paradigm, where designers will focus on reducing the post-development stormwater runoff volume from a site, as well as meeting more stringent nutrient load reduction requirements to improve water quality.

1b. Training and Certification (9VAC25-850)

The VSMA requires personnel working in a VSMP to obtain and maintain a certificate of competence in the area of stormwater management. DEQ is required by the VSMA to create an expanded training and certification program.

The Erosion and Sediment Control and Stormwater Management Certification Regulations (9VAC25-850) require individuals performing certain duties in a Virginia Erosion and Sediment Control Program (VЕСP) and/or a VSMP to be certified.

The following graphic illustrates the prerequisite courses needed for each certification through the traditional training and certification curriculum.

Erosion and Sediment Control (ESC) Exam Eligibility Training					
Table 1-1					
Program Administrator	=	ESC 2-day Basic			
Inspector	=	ESC 2-day Basic	+	ESC 1-day Inspector	
Plan Reviewer	=	ESC 2-day Basic	+	ESC 2-day Plan Reviewer	
Combined Administrator	=	ESC 2-day Basic	+	ESC 1-day Inspector	+ ESC 2-day Plan Reviewer

Stormwater Water Management (SWM) Exam Eligibility Training					
Table 1 - 2					
Program Administrator	=	SWM 2-day Basic			
Inspector	=	SWM 2-day Basic	+	SWM 1-day Inspector	
Plan Reviewer	=	SWM 2-day Basic	+	SWM 2-day Plan Reviewer	
Combined Administrator	=	SWM 2-day Basic	+	SWM 1-day Inspector	+ SWM 2-day Plan Reviewer

On-The-Job Experience

The other path for obtaining a certificate of competence is through on-the-job work experience in one of the classifications list in Table 1-1 and 1-2. If an individual has accumulated a minimum of 800 hours of on-the-job experience (verified through the application) they may be eligible to take the exam without attending training courses.

Dual Certificate

Individuals who perform both VESCP and VSMP duties may obtain a Dual Certificate of Competence by surrendering both valid certificates to the Department and paying the required administrative fee. For instance, a person who holds a valid ESC Inspector Certificate and obtains a SWM Inspector Certificate may surrender both certificates and obtain a Dual Inspector Certificate.

The dual certificate will [expire three years from the latest date of either certificate](#) being surrendered.

Dual Certificates of Competence				
Table 1-3				
ESC Program Administrator	+	SWM Program Administrator	=	Dual Program Administrator
ESC Inspector	+	SWM Inspector	=	Dual Inspector
ESC Plan Reviewer	+	SWM Plan Reviewer	=	Dual Plan Reviewer
ESC Combined Administrator	+	SWM Combined Administrator	=	Dual Combined Administrator

Certain Licensed Professionals are automatically certified as ESC Plan Reviewers. However, they must be certified to conduct ESC inspections or perform as an ESC Program Administrator. In the area of SWM, those professionals are [not](#) automatically certified and must obtain a certificate of competence if they are performing the duties of a VSMP Program Administrator, Inspector or Plan Reviewer (see section 9VAC25-850-50 of the Regulations for further details on who meets these requirements). Re-certification for those individuals is different and will be discussed below.

Exam

The exams are open book. You will be notified about what materials you are allowed to bring as reference material to take the exam. Typically the DEQ Handbooks along with course participant guides are used. Materials must be in a bound (3-ring) binder. No loose papers or study materials are allowed.

You will be notified of your exam results and if successful, you will receive your certificate via mail. If you fail the exam, you will be eligible to take it again up to one year without submitting an additional request or application. Additional exams are [not free](#). You must attain a minimum score of [70%](#) in order to pass the exam. For exams that contain multiple parts, you must attain a minimum score of [70% on each part](#).

Certificates and re-certifying

All certificates of competence are valid for [three years](#). In order to maintain your certificate of competence, you must re-certify every three years. There several ways in which to re-certify:

1. Re-take the exam before the expiration date on your current certificate;
2. Attend the DEQ training courses required for your individual certificate; or
3. Complete the required amount of contact or CEU hours

Once you have completed either items 2 or 3 above, you may apply for re-certification and pay the appropriate fee.

Important!

You must re-certify [before](#) the expiration of your certificate in order to keep it valid. [If your certificate expires, you cannot re-certify](#). You must take another certification exam.

Individual work experience may qualify you to take the exam however, you must re-apply to take the exam or you may be required to attend the training again and certify through that path depending on your individual situation. Licensed Professionals may re-certify by providing evidence that they still hold a valid license and pay the appropriate fee. All re-certification of classifications must pay the appropriate fee. You may re-certify during the

last 12 months of your valid certificate without losing time on the valid certificate. The three years will be added to the expiration of that valid certificate.

Provisionally Certified

Once you are enrolled in the DEQ training program, you are “provisionally” certified. You have 12 months to complete the training program and 12 months from completion of the training program to obtain a passing score on the certification examination. See [9VAC25-850-50](#) for details and applicability.

RLD

The other certificate issued by the Department is the Responsible Land Disturber (RLD). This certificate is intended for individuals who are responsible for carrying out the land-disturbing activity (LDA) in accordance with the approved ESC plan. The RLD may be the owner, applicant, permittee, designer, superintendent, project manager, contractor, or any other project or development team member. The RLD must be designated on the ESC plan or permit as a prerequisite for engaging in land disturbance.

For further questions regarding training and certification, please visit the FAQ link on the DEQ Training & Certification page:

www.deq.virginia.gov/ConnectWithDEQ/TrainingCertification.aspx.

1c. Roles and Responsibilities in a VSMP Authority

A VSMP authority is comprised of a program administrator, plan reviewer, project inspector, and in some cases, a combined administrator.

Program administrator

- Ensures plan review, approval, inspections, and enforcement are being properly conducted
- Completes annual report
- Manages long-term maintenance agreements
- Coordinates enforcement proceedings
- Keeps records
- Collects fees
- Updates local ordinances as needed

Plan reviewer

- Responsible for review of stormwater management plans to ensure they adhere to the Regulations and local ordinance(s)

Project inspector

- Reviews pollution prevention plan
- Conducts regular inspections of active construction sites to ensure proper construction and function of BMPs and other stormwater structures
- Ensures SWPPP is updated and implemented as required
- Documents inspections
- Initiates enforcement action when needed
- Ensures compliance to correct deficiencies or violations

Combined administrator

- Responsible for performing the combined duties of a program administrator, plan reviewer, and project inspector